light that penetrated beyond the fifty-foot limit reached the eye. The migration, which had just begun when I arrived, could be splendidly observed by means of this patch of light. The birds could be seen flying to and fro in all directions, generally keeping within the ring, as if reluctant to leave the region of light and go into the darkness beyond. Although it would be an easy thing to distinguish the different families from each other in the strong light of the lantern, it would take a good deal of practice to tell the species apart. One species, however, was easily distinguishable as the birds flew back and forth,-the Yellow Warbler. It was, indeed, a pretty sight to see these birds flitting around, their yellow breasts and bellies illumined by the rays from the lantern. I identified but one other species in the halo, the Redstart. Chas. B. Field said, however, that he could sometimes in the migrations distinguish Robins and Catbirds. He also remarked that in the fall migration all the birds struck on the W. S. W. side of the lantern, instead of on the E. N. E., as it might be supposed they would. All the birds that were picked up from the concrete were also on the W. S. W. side of the tower, showing that they very probably struck on that side. In the morning after every cloudy night, various Warblers. that had either been weakened by striking and had not the strength to go on, or had been caught by daylight and stopped to feed, would be seen flying around the shores of the island. Three species were thus observed, Black-and-white Warblers, Yellow Warblers, and Redstarts, of which the second species was most common. In fact the Yellow Warblers were seen on both Great Gull and Little Gull Islands. But few birds of any kind struck during my stay, probably because, although a number of the nights were foggy, none were stormy.

- 22. Setophaga ruticilla. AMERICAN REDSTART.—As remarked in the preceding note, one individual was observed flying around the light Another was shot while it was feeding around the shores of Little Gul on the morning of the 8th.
- 23. Merula migratoria. AMERICAN ROBIN.—While after Terns one day, on Great Gull, Chas. B. Field saw a Robin, and although I did not see the bird myself I place perfect faith in his identification. He also informed me that Robins sometimes struck the light.

BIRD NOTES FROM LONG ISLAND, NEW YORK.

BY WILLIAM DUTCHER.

1. Oceanodroma leucorhoa. LEACH'S PETREL.—Three Petrels are included in Giraud's Long Island list, as follows: Wilson's, Forktailed, and the Least, the two latter being now known as Leach's and the Stormy Petrel. Mr. Lawrence included these, and added the Tropical

Fulmar, now known as the Black-capped Petrel, a straggler of this species having been taken at Quogue, L. I., in 1850.* That the Stormy Petrel (*Procellaria pelagica*) was included on insufficient grounds is indicated by our present knowledge of its distribution. The general resemblance to each other of the three species of this family included by Mr. Giraud in his list is so great, and as they are not usually found near the shore, it is not strange that they have been confounded in the earlier records. Mr. Giraud considered Leach's Petrel rare, as he records it in the following words: "Is of rare occurrence on the shores of Long Island."† The only specimen of this species that I have been able to procure, thus far, is a male, which struck Fire Island Light on the night of May 4, 1888, between the hours of 10 P. M. and 2 A. M. The weather was thick, with a brisk southwest wind.

2. Oceanites oceanicus. Wilson's Petrel.—Of this species Mr. Giraud says: "Are not uncommon off Sandy Hook, within sight of land, and occasionally stragglers are seen coasting along the shores of Long Island."‡ Petrels are not uncommon off the Long Island coast during the summer months, and that they are mostly of this species I am led to believe from the present evidence. Gunners and baymen on the south side tell me that they have seen Petrels off shore while bluefishing, but that they rarely see them near the surf line, or on the bays, except after very heavy blows. A letter written by Mr. W. L. Breese, § who owns and resides on an extensive estate called Timber Point, near Islip, L. I., proves that they are sometimes found in Great South Bay. In a communication to Dr. A. K. Fisher, June 25, 1888, he says: "I saw a flock of about twenty-five Petrels in the bay, this week, the only ones I have ever seen down here. I do not know what they were doing here so late in the season and so far up the bay." | July 20, 1888, Mr. N. T. Lawrence, B. H. Dutcher, and the writer sailed through Rockaway Inlet in a bluefish smack, for the purpose of ascertaining what Petrels, if any, were to be found off Rockaway Beach and Coney Island. We went out on the last of a strong ebb tide and with a very light breeze, that hardly filled our flapping sail. When about a mile off shore we saw a single Petrel, which passed us out of gunshot, flying parallel with the shore. In a short time this or another individual passed us going in an opposite direction. Until we were nearly two miles off shore we saw single individuals at short intervals, always just skimming the tops of the long ground-swells, apparently in search of food. When about two and one half miles off shore, we changed our course and sailed parallel with the beach; almost imperceptibly the Petrels became more numerous. We would see a pair flying in company, or a small flock of six or eight scattered in an irregular but

^{*} Ann. Lyc. Nat. Hist., Vol. V, p. 220.

[†] Birds of Long Island, p. 372.

[‡]Ibid., p. 371.

Deceased since this was written. See Auk, Vol. VI, p. 81.

^{||} About eight miles northeast from Fire Island Inlet and near the main land.

following manner. Sometimes one or two would rest for a moment on the water, floating buoyantly, like a tossing cork. Where the ebbing tide made slick, greasy looking streaks on the water, and also in eddies where drift and floatage gathered, these birds seemed most fond of congregating, evidently for the particles of food they there found. We remained on the ocean about three hours, when the gathering wind and clouds warned us to return to the more quiet waters of the bay. While the wind was light the Petrels were quite shy and would rarely come within gunshot, but as the breeze became stronger and the water rougher, they seemed to lose their fear of our boat and we could sail within gunshot without difficulty. Six specimens were secured, all proving to be of this species. Many more could have been shot, but unfortunately we were without a landing-net and so could not recover them. While returning to the beach we saw them in gradually lessening numbers, the last one being just inside the mouth of the inlet. While feeding, their movements were extremely graceful. On finding floating matter they would hover over it, dropping their feet to the water and apparently patting it, and, with partially extended wings, bend their necks so that their bills would point downwards at a right angle to the body. During the early part of August, Petrels were common at the entrance to Long Island Sound, as per report of Basil Hicks Dutcher;* the only one he secured was of this species. That they sometimes wander westward through the Sound is established by the record made by Robert B. Lawrence, of one taken near Sands Point, Queens Co., August 7, 1881.†

- 3. Phalacrocorax carbo. Cormorant.—September 24, 1888, I received in the flesh a magnificent specimen of this species from Chas. B. Field, who had shot it two days previously near the Little Gull Island Light. He subsequently wrote to me in answer to inquiries, "There were two of them, both alike. We have a much smaller kind, all black. I often see the large kind, both alone and with the smaller black ones. I do not know that I have ever seen a flock without a few of the large ones (like specimen sent) with them. I have seen in one day, perhaps thirty of the large ones, but they are not so plenty as the small ones. Both kinds are very wild and hard to get at." With the aid of observations which Mr. Field has promised to make in the future, and the specimens he hopes to procure of both the Cormorants credited to Long Island, I trust soon to be able to define their status in that district.
- 4. Anas boschas + obscura. HYBRID.—March 17, 1888, Andrew Chichester, a professional South Bay gunner and bayman, sent to me from Amityville, Suffolk Co., the above-indicated very beautiful hybrid. His letter accompanying it I give in full: "I send you a Duck different from anything I ever saw in my experience as a gunner. It looks to me like a mongrel, half Mallard and half Black Duck. It was in a flock of five, I think. They came in wide, so I only shot at the one, and I did not see

^{*}See antea, p. 128.

Forest and Stream, Vol. XXVII, p. 428.

hat it was different from a common Black Duck until I picked it up, so I cannot tell whether the remainder of the flock were similar to it or not." Mr. F. M. Chapman has kindly prepared the following description of this hybrid for record. "In the male hybrid between boschas and obscura there is, on the whole, a fairly equal division of the characters of both parents; the crown, hind-neck, and nape are as in boschas; the sides of the head, the throat, and neck resemble more those of obscura, but there is a wash of green on the first named region, and the chin is blackish. The lesser and median wing-coverts and tertials are similar to those of boschas, while the speculum is that of obscura, with the terminal border of white more as in boschas. The upper and lower tail-coverts resemble those of boschas, but the tail differs very slightly from that of obscura. Below the ground work is nearly as in obscura, but there is a suffusion of chestnut over the entire breast."

- 5. Histrionicus histrionicus. Harlequin Duck.—Since my previous records* of this species, one other specimen has come to my notice. Dr. Wm. M. Smith, Health Officer of the Port of New York, has in his pos session a mounted specimen which was shot during the winter of 1887-88. in the vicinity of Swinburne Island, Lower Bay, New York Harbor, by one of the hospital employees stationed there. It was alone when secured.
- 6. Crymophilus fulicarius. RED PHALAROPE.—Capt. Scott, early in September, 1886, found on the beach at Montauk a specimen of this species, dead. The skin was sent to me for identification with the statement that, "The bird is rare here." No other records were obtained until October 22, 1888, when Mr. William L. Baker, one of the crew of the Ditch Plain Life Saving Station, near Montauk Point, sent to me, in the flesh, a male Northern Phalarope, and a female Red Phalarope, with the following very interesting letter: "October 22, Montauk, Long Island. You will find enclosed two birds which I killed while they were feeding in the surf abreast of this station. I wish to know what they are, as I have never seen any like them before. They came here about ten days ago. They are the most graceful little fellows on the water that I ever saw, and they seem to be experienced surfmen, for the surf seems to be their home altogether." Subsequently he wrote: "There were four of them, two large and two small ones. Both of the latter and one of the former were killed. The fourth one remained about an hour and then disappeared. There are men who have been at this station for the past twelve years; I have been here nine years, and we do not remember seeing any such birds on Montauk before." Mr. Giraud remarks of them: "This is another species with which our acquaintance is very limited. The specimen now before me was shot on the beach at 'Quogue,' and I have seen a few others that were procured in that vicinity."†
- 7. Phalaropus lobatus. Northern Phalarope.—Since my last record of this species in May, 1884,‡ I have obtained a number of records and

^{*} Auk, Vol. III, p. 434. †Birds of Long Island, p. 245. ‡Auk, Vol. III, p. 436.

also specimens, both in spring and fall, all from Montauk Point, the extreme southeastern end of Long Island. It would seem from this fact that these Phalaropes do not, in migrating, follow the outline of the coast, as most of the Limicolæ of Long Island do, but in coming northward in the spring leave the coast in the neighborhood of Delaware or lower New Jersey and by taking a northeasterly route reach Cape Cod. During the southward migration the reverse obtains. A few only of the great body of these migrants approach the land, even at Montauk, except in case of heavy and adverse winds. September 3, 1886, three individuals struck Montauk Point Light, one of which was sent to me by the keeper, Captain 1. G. Scott. He informed me that there were about twenty of the same kind of birds about the light and that some of the same species were seen on the beach the next day. He stated they are not uncommon in August and September. May 5, 1888, two specimens were sent to me by Captain Scott. He reported about fifty around the light when these struck, and that there were "Lots of them hovering about the light from midnight to four A. M." Captain Scott thought these a new species, as he had not before seen them in their spring plumage, and consequently did not recognize them as the same species of 'web-footed snipe' that he had seen, not uncommonly, in the fall of the year. Both of the specimens sent to me were females in very high plumage. The ova in both were very small. May 29, 1888, three additional specimens were sent to me from Montauk, which struck the tower that night, during a fog, with an east wind. There were about twenty in the flock. The specimens were all males, but were not in such high plumage as the females that were migrating nearly a month in advance of them. That they were adult birds and would have bred was indicated by the testes, which were about fully developed. August 13, 1888, the return migration had commenced, as three out of a flock struck the same light at 3 A. M. and just in advance of a southeast storm which commenced shortly after.

The specimen taken October 22, 1888, by Mr. Baker, is the latest seasonal record that I have. How much longer this pair would have remained it is hard to conjecture, but it is fair to suppose that if the food supply continued satisfactory to them, only a marked and unfavorable change in the weather would have hurried them on their southward journey. The status of this Phalarope on Long Island may be briefly described as follows: In the spring, rather rare except when driven shoreward by storms. In the fall, not uncommon in the eastern and middle south shore, and rare at the western end of the Island. On the Sound side of the Island I have only one record,—of one which was caught alive by the keeper of Little Gull Island Light, some years since.*

Mr. Giraud says of them: † "With us, it is seldom observed. The last

^{*}An additional Sound record may be found in Bull. Nutt. Orn. Club, Vol. V, p. 117 of one taken Sept. 29, 1879, at Flushing, Queens Co., by C. A. Willets, the record being made by Robert Lawrence.

[†] Birds of Long Island, pp. 248, 249.

individual that I met with, I came upon while engaged in shooting Terns on the inner beach, in the latter part of June. I observed it at a distance in company with a party of small Sandpipers, which I was scrutinizing through a glass that always accompanies me in my collecting tours. Appearing longer than its associates, and too small for the Yellow-shanks, or other familiar species of which we have spoken, I immediately set about ascertaining to what species it belonged--and as I advanced, was much pleased to find that an opportunity offered to secure another specimen of one of the rarest of our birds. It was very gentle, and seemed to have no disposition to take wing, although I had arrived quite near. It was standing in a shallow pool of water, and during my observations remained in a listless attitude, scarcely changing its position until alarmed by the explosion of the cap of the first barrel of my gun, which missed fire-when it sprung up, uttering a low whistling note; and while passing slowly from me, with the other barrel I secured it. On dissection it proved to be a male, and from its plumage I considered it the young of the year. In its stomach I found particles of shells and sand." Mr. Giraud's inference that the specimen in question was of the "young of the year" seems hardly correct in view of the fact that the date he gives is "the latter part of June." It is probable that it was a more than usually dull plumaged adult male bird.

- 8. Tryngites subruficollis. BUFF-BREASTED SANDPIPER. Mr. Giraud considered this species on Long Island, as "Nota very common bird, though its occurrence is by no means unusual. Almost every season a few are observed along the southern shores of Long Island, and during autumn we occasionally find it in our markets stripped of its feathers, and exposed for sale along with the Pectoral Sandpiper."* My first specimen of this Sandpiper was not secured until August 28, of this year (1888), when one was presented to me by Mr. Frank M. Lawrence of Mastic, Suffolk Co. He subsequently wrote: "It was shot by a lad who sent it to me to identify, and as it was a strange bird to me I forwarded it to you. He shot it on the meadows on the north side of the bay. It was alone." The only other specimen of this species that has come under my personal observation was one shot by Capt. W. N. Lane, in midsummer some twelve years since. It was presented to Mr. George Lawrence Nicholas and is now, I believe, in the Princeton College collection. Other late records for Long Island have been made by Mr. N. T. Lawrence† and Mr. DeL. Berier. ‡
- 9. Picoides arcticus. Arctic Three-toed Woodpecker. While on a visit to Sag Harbor, Suffolk Co., partially for the purpose of ornithological research, I visited the taxidermic studio of Messrs. Lucas and Buck. While looking through their stock of skins and mounted birds I found a specimen of this species. Neither Mr. Lucas nor Mr. Buck could remember from whom they had received it, as large numbers of birds in

^{*} Birds of Long Island, p. 231.

[†] Forest and Stream, Vol. X, p. 235.

[‡] Bull. Nutt. Orn. Club, Vol. VI, p. 126.

the flesh are sent to them from the surrounding country, of which they keep no record. Mr. Lucas was very positive, however, that it had been received in the flesh, from Long Island, during the winter of 1887-88. His reasons for his belief were that he knew from the make-up of the skin and the material used in its preparation, that it was his own handiwork. Furthermore, he said, his firm never received any birds or skins other than from Long Island. He was almost certain that they had had this species of Woodpecker before. The specimen is now in my collection, No. 1028. This record adds a new member of the order Pici to the Long Island list, it not being included in the lists of either Messrs. Giraud or Lawrence.

10. Contopus borealis. OLIVE-SIDED FLYCATCHER. — During the night of August 19, 1888, an individual of this species struck Fire Island Light and was sent to me by Mr. John G. Skipworth, 1st Asst. Keeper, with forty-two other birds of various kinds. Wind west, rather squally, with rain and fog. This makes the third specimen to be recorded from Long Island, the prior records having been made by Mr. N. T. Lawrence* and Mr. DeL. Berier.†

My correspondent, Mr. A. H. Helme, of Miller's Place, Suffolk Co who is well known to very many members of the Union, tells me that he has seen this Flycatcher on Long Island but has never taken a specimen.

- 11. Calcarius lapponicus. Lapland Longspur.—Mr. John Hendrickon shot one October 18, 1888, at Long Island City. He informs me that it was alone, and was secured as it flew up from among some weeds growing on the edge of a drain. From the fact that Horned Larks (Otocoris alpestris) were first seen that day, he thinks it not unlikely that the Longspur had migrated southward in their company. This is the earliest autumn date of which I have any record.
- 12. Spiza americana. DICKCISSEL.—At the time when Mr. Giraud was collecting data for his list of Long Island birds, the Black-throated Bunting must have been a not uncommon bird. This is the only inference that can be drawn from his statement: "About the middle of May the Black-throated Bunting arrives on Long Island from the South. It prefers the grain, grass and clover fields, where it continues its oft-repeated chirrup until the early part of August, then becoming silent. In the early part of September it migrates southward." The Lawrence collection contains a male and a female specimen from Long Island. Mr Helme, of Miller's Place, was so fortunate as to secure two specimens this fall, both of which he considered migrants. They were also the first that he had ever shot on Long Island. The first one, a young male, was secured September 29, and the second was taken October 10. Mr. Helme

^{*} Forest and Stream, Vol. X, p. 235.

[†] Bull. Nutt. Orn. Club, Vol. V, p. 46. The specimen recorded by Mr. N. T. Lawrence in 'Forest and Stream' was subsequently recorded by Mr. Robert Lawrence in Bull. Nutt. Ornith. Club, Vol. V, p. 116.

[‡]Birds of Long Island, p. 100, 1844.

was crossing the field in which he obtained the specimen September 29 when he saw what he supposed were three individuals of this species. They, however, flew before he had a chance to secure either of them. He returned to the same field about noon and flushed one which was in company with some Song Sparrows. It flew into an apple tree when he secured it. It proved to be a male, and the exact counterpart of the one first shot. The above are the only Long Island records that I am cognizant of since the Giraud and Lawrence lists were published.

- 13. Lanius ludovicianus. Loggerhead Shrike.—The first record of this species on Long Island was made by Mr. N. T. Lawrence in 1878.* No other records have been made since, that I am aware of. I have the pleasure of adding a second record; a male, young of the year, taken August 28, 1888, at Springs, Suffolk Co. It was sent to me in the flesh by a correspondent, Mr. Daniel D. Parsons, who occasionally sends me birds, especially those that are new or strange to him. His letter of trans mittal stated that the Shrike "was alone, and was shot from the highest branch of an apple tree, in the middle of a field. I never saw one like it before." From the date of capture, and also from the locality—near the extreme eastern part of the Island—it is probable that this specimen was bred on Long Island or in the adjoining State of Connecticut.
- 14. Helminthophila peregrina. Tennessee Warbler.—This species was introduced into the Long Island list by Mr. George N. Lawrence.† In his collection, now in the American Museum of Natural History, New York City, there is one specimen, a male, from Long Island. Since the above I can find no other records from that locality. I have had the pleasure of adding to my collection four specimens from Long Island, from the lighthouses.
- Sept. 23, 1887. Sex? Fire Island Light. Wind, N. N. E., very fresh; partly cloudy.
- - " 19, " " & Montauk Point Light. " N. N. E., moderate cloudy.
- 15. Dendroica castanea. BAY-BREASTED WARBLER.—Mr. Giraud said of it: "The Bay-breasted Warbler is among the last of the Genus that arrives among us in spring. During some seasons it occurs in considerable numbers, but in general it is by no means plentiful." The Lawrence collection contains two examples, a male and a female, from Long Island. Mr. A. H. Helme, who is an indefatigable and very careful collector, kindly permits me to record the specimens of this species that he has taken at Miller's Place, Suffolk Co., since he has been collecting. May 29, 1882, a male; May 16, 1884, a male; September 12, 1888, one, sex not given. September 14, 1888, he was sure he saw another, but

*Forest and Stream, Vol. X, p. 235. †Ann. Lyc. Nat. Hist., Vol. VIII, p. 284, 1866. †Birds of Long Island, p. 62. it was not secured, and on the 29th of the same month he secured one making his second specimen for this fall. I have never met with it in any of my collecting trips, nor has my son, nor have I ever found a light, house specimen, although I have received and examined carefully hundreds of Warblers from the lights during the past few years.

- 16. Geothlypis formosa. Kentucky Warbler.—Mr. Giraud says: "The specimen in my possession was shot in the woods at Raynor South,—and a few others have been procured in the same section. On no other part of the Island have I observed it, and I consider it with us a very scarce species."* In the Lawrence collection in the American Museum, there is one specimen, a male, labelled, "Raynor South, May 18, 1834." Since the lists of Giraud and Lawrence were published no other record has been made; therefore, it gives me pleasure to record a specimen, a male, which was sent to me by Mr. Skipworth from Fire Island Light, where it struck during the night of August 19, 1888; wind west, squally, with rain and fog.
- 17. Sylvania mitrata. Hooded Warbler.—"With us, the Hooded Flycatching Warbler is not abundant" is the note of Giraud.† In the Lawrence collection in the American Museum, there is but one specimen, a male, from Long Island. The only specimen* that I have in my collection, and also my only record from Long Island, is of one that struck Fire Island Light, during the night of September 1, 1888. Wind, N. W., light; cloudy.

GRAPHIC REPRESENTATION OF BIRD MIGRATION.

BY WITMER STONE.

EVERY ONE interested in bird migration no doubt notices the steady increase in species and individuals as the spring advances, the number reaching its maximum some time in May, and then falling off and becoming uniform during the early summer when the birds have completed their migrations and are busy building their nests and rearing their young. Again in the latter part of summer the number increases, reaches its maximum in September, and then steadily decreases until winter, when the minituum is reached.

^{*}Birds of Long Island, p. 50.

[†]Ibid., p. 48.